



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,893	03/31/2004	Frederick L. Travelute III	3000.193	5764
21176 7590 12/07/2007 SUMMA, ALLAN & ADDITON, P.A. 11610 NORTH COMMUNITY HOUSE ROAD SUITE 200 CHARLOTTE, NC 28277				
EXAMINER				
VO, HAI				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
12/07/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/813,893

**Applicant(s)**

TRAVELUTE ET AL.

**Examiner**

Hai Vo

**Art Unit**

1794

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 11-16, 20-41, 43, 45-48, 51-57 and 60-73 is/are pending in the application.
- 4a) Of the above claim(s) 22-39 and 61-73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-16, 20, 21, 40, 41, 43, 45-48, 51-57 and 60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-848)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1794

1. All of the art rejections are maintained.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 11, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siggel et al (US 4,164,603) in view of Nichols et al (US 6,485,829) and Soehngen et al (US 4,290,987). Siggel discloses a filament of polyester having a plurality of voids occupying from 5 to 50 volume %, which is within the claimed range (column 5, lines 5-7). The filament has 12 to 18 cells per axial cross section (column 8, lines 50-51). The filament contains silicone and a nucleating agent which aids the formation of the voids during the spinning process (column 2, lines 55-60). Siggel discloses the filament with a density lower than 1 g/cc can be obtained (column 4, lines 19-20). There are no burst surface areas in the filament (column 9, lines 28-29). Likewise, the filament has a smooth surface.

The filaments are useful as an upholstery material which reads on Applicants' fabric material (example 3). Siggel does not specifically disclose the use of copolymer of polyester and polyethylene glycol for the filaments. Nichols, however, discloses a non-woven fabric material made from polyester filaments that are modified with polyethylene glycol in the amount of 6% by weight to 16% by weight to produce the fabric with exceptionally good esthetics and hand. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the copolymer of polyester and polyethylene glycol for the polyester filament motivated by the desire to have the fabric having the wetting and wicking properties similar to those of cotton and other natural fibers while maintaining the elasticity of the polyester fibers, thereby producing exceptionally good esthetics and hand in the fabric. It appears that Siggel as modified Nichols uses the same copolymer as Applicants, namely copolymer comprising polyester and polyethylene glycol present in amount of between about 6 to 10 wt%. Therefore, it is the examiner's position that the polyester copolymer would substantially inherently have a greater elasticity than a corresponding monomer-based polyester.

Siggel discloses the use of the nucleating agent but Siggel does not specifically disclose how much the nucleating agent is used. Soehngen, however, teaches the use of silica or PTFE particle with a particle size of 0.5 to 1 microns as a nucleating agent for the formation of polyester filaments (column 5, lines 25-30, 45-50). Soehngen teaches the nucleating agent present in the amount of 0.01 to 1 % by weight of the polyester composition. Therefore, it would have been obvious to

one having ordinary skill in the art at the time the invention was made to use the nucleating agent with the amount as taught by Soehngen motivated by the desire to aid the formation of the voids during the spinning process. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the PTFE particle for the silica as the nucleating agent since PTFE and silica have been shown in the art to be recognized equivalent nucleating agents for low density polyester fibers.

5. Claims 8, 9, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siggel et al (US 4,164,603) in view of Nichols et al (US 6,485,829) and Soehngen et al (US 4,290,987) as applied to claim 1 above, further in view of JP 08-260285. Siggel does not disclose the fibers having the grooves formed on the fiber surfaces. JP'285, however, teaches a woven polyester fabric comprising the fibers having the grooves formed on the fiber surfaces to provide a fabric that is light in weight and has excellent characteristics of appearance, hand and comfort (abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use fibers having the grooves formed on the fiber surfaces motivated by the desire to provide a fabric that is light in weight and has excellent characteristics of appearance, hand and comfort.
6. Claims 55-57 and 60 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Li et al (US 4,626,390). Li discloses a self-crimping foamed fiber made from polyester having a volume fraction of at least 10 % overlapping with the claimed range (abstract). The foamed fiber has

at least 5 cells per axial cross section as shown in figure 5. Li discloses the foamed fiber having a denier of 15 and a density less than 0.9 g/cc (table). Li discloses the fiber having a plurality of closed cells and open cells distributed over the cross-sectional area of the fiber (column 1, lines 10-15). The total stretch ratio of both spinning and drawing is about 5 to 250 (column 5, lines 35-40). As shown in figures 6-10, the fiber has a fibrillated surface. Li does not teach the fiber with irregular longitudinal surface effects. However, in accordance with the specification of the present invention, the surface effects (smooth, fibrillated, channeled and pitted) are dictated by the void volume, cells per axial cross section and total stretch ratio of both spinning and drawing. Li discloses a fiber having the void volume, cells per axial cross section and total stretch ratio of both spinning and drawing within the claimed ranges. Therefore, it is not seen that the fiber could not have surface effects as set forth in the claims. Accordingly, Li anticipates or strongly suggests the claimed subject matter.

7. Claims 1-7, 11, 13-15, 17-19, 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al (US 4,626,390) in view of Nichols et al (US 6,485,829). Li discloses a self-crimping foamed fiber made from polyester having a volume fraction of at least 10 % encompassing the claimed range (abstract). The foamed fiber has at least 5 cells per axial cross section as shown in figure 5. Li discloses talc present in the amount of 0.2 % by weight (example 3). Li discloses the foamed fiber having a denier of 15 and a density less than 0.9 g/cc (table). Li discloses the fiber having a plurality of closed cells and open cells distributed over

the cross-sectional area of the fiber (column 1, lines 10-15). Figure 5 shows that the foamed fibers having a pitted surface. As shown in figures 6-10, the fiber has a fibrillated surface. Li does not specifically disclose the use of copolymer of polyester and polyethylene glycol for the filaments. Nichols, however, discloses a non-woven fabric material made from polyester filaments that are modified with polyethylene glycol in the amount of 6% by weight to 16% by weight to produce the fabric with exceptionally good esthetics and hand in the fabric. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the copolymer of polyester and polyethylene glycol for the polyester filament motivated by the desire to have the fabric having the wetting and wicking properties similar to those of cotton and other natural fibers while maintaining the elasticity of the polyester fibers, thereby producing exceptionally good esthetics and hand. It appears that Li as modified Nichols uses the same copolymer as Applicants, namely copolymer comprising polyester and polyethylene glycol present in amount of between about 6 to 10 wt%. Therefore, it is the examiner's position that the polyester copolymer would substantially inherently have a greater elasticity than a corresponding monomer-based polyester.

Li does not specifically disclose that the self-crimped foamed fiber is hollow.

However, Li mentions the hollow fibers are known in the art. Travelute discloses the hollow filaments that are light in weight. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the hollow

self-crimped foamed fibers motivated by the desire to reduce the weight and the cost of the product without affecting the mechanical strength of the fibers.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al (US 4,626,390) in view of Nichols et al (US 6,485,829) as applied to claim 1 above, further in view of Soehngen et al (US 4,290,987). Li discloses the use of silica as a nucleating agent, but Li does not specifically disclose the use of PTFE particle as the nucleating agent. Soehngen, however, teaches the use of silica or PTFE particle with a particle size of 0.5 to 1 microns as a nucleating agent for the formation of polyester fibers (column 5, lines 25-30, 45-50). Soehngen teaches the nucleating agent present in the amount of 0.01 to 1 % by weight of the polyester composition. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute PTFE particles for silica since two substances have been shown in the art to be recognized equivalent nucleating agents for formation of polyester fibers.
9. Claims 8, 9, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al (US 4,626,390) in view of Nichols et al (US 6,485,829) as applied to claim 1 above, further in view of JP 08-260285. Li does not disclose the fibers having the grooves formed on the fiber surfaces. JP'285, however, teaches a woven polyester fabric comprising the fibers having the grooves formed on the fiber surfaces to provide a fabric that is light in weight and has excellent characteristics of appearance, hand and comfort (abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use fibers



having the grooves formed on the fiber surfaces motivated by the desire to provide a fabric that is light in weight and has excellent characteristics of appearance, hand and comfort.

10. Claims 40, 41, 43, 45-48, and 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al (US 4,626,390) in view of Nichols et al (US 6,485,829) and Travelute et al (US 5,407,625). Li discloses a self-crimping foamed fiber made from polyester having a volume fraction of at least 10 % encompassing the claimed range (abstract). The foamed fiber has at least 5 cells per axial cross section as shown in figure 5. Li discloses silica as a nucleating agent present in the amount of at least 0.2 % by weight (column 3, line 35 and column 4, line 1-2). Li discloses the foamed fiber having a denier of 15 and a density less than 0.9 g/cc (table). Li discloses the fiber having a plurality of closed cells and open cells distributed over the cross-sectional area of the fiber (column 1, lines 10-15). Figure 5 shows that the foamed fibers having a pitted surface. As shown in figures 6-10, the fiber has a fibrillated surface. Li does not specifically disclose the use of copolymer of polyester and polyethylene glycol for the filaments. Nichols, however, discloses a non-woven fabric material made from polyester filaments that are modified with polyethylene glycol in the amount of 6% by weight to 16% by weight to produce the fabric with exceptionally good esthetics and hand. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the copolymer of polyester and polyethylene glycol for the polyester filament motivated by the desire to have the fabric having the wetting and wicking properties

similar to those of cotton and other natural fibers while maintaining the elasticity of the polyester fibers, thereby producing exceptionally good esthetics and hand in the fabric. It appears that Li as modified Nichols uses the same copolymer as Applicants, namely copolymer comprising polyester and polyethylene glycol present in amount of between about 6 to 10 wt%. Therefore, it is the examiner's position that the polyester copolymer would substantially inherently have a greater elasticity than a corresponding monomer-based polyester.

Li does not specifically disclose that the self-crimped foamed fiber is hollow.

However, Li mentions the hollow fibers are known in the art. Travelute teaches the hollow filaments that are light in weight. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the hollow self-crimped foamed fibers motivated by the desire to reduce the weight and the cost of the product without affecting the mechanical strength of the fibers.

Li does not specifically disclose the self-crimped foamed fiber having different degrees of orientation along at least two adjacent longitudinal portions of the fiber.

Travelute, however, teaches self-texturing filament having different degrees of orientation along at least two adjacent longitudinal portions of the filament.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the foamed fibers having different degrees of orientation along at least two adjacent longitudinal portions of the filament by preferentially directionally quenching as disclosed by Travelute because the differences in orientation cause the filament to shrink to different extents on the

opposite sides of its cross section, thereby enhancing the crimping of the fibers, i.e., a helical or spiral crimp of the filament is obtained.

### ***Response to Arguments***

11. The art rejections based on Siggel have been maintained for the following reasons.

Applicants contend that Siggel is relied on as evidence to show the state of fact – the silicone oil materially changing the properties of polyester filaments that are intended to be produced with discrete cavities. Applicants further conclude that the “consisting essentially of” is sufficient to exclude the silicone oil from the foamed fiber of the claimed invention. The arguments appear to be flawed and incomplete. Turning to the present invention, the claimed foam fiber is comprised of a plurality of voids that are separate from each other as shown in figures 8 and 16. In light of the teaching of Siggel, addition of the silicone oil to the foamed fiber would effectively enhance the formation of separate discontinuous cavities. Therefore, it is factually erroneous to conclude that the silicone oil materially changes the basic and novel properties of the present invention. The examiner notes that the “consisting of” would be sufficient to remove Siggel as prior art.

### ***The examiner's comments regarding claim 1***

Applicants argue that Nichols includes a small amount of polyethylene glycol in polyester fibers for increasing the wetting and wicking properties of those fibers. Applicants, however, modified the polyester composition for enhanced production of foam fibers. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for

patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Applicants contend that Siggel never refers to the wetting or wicking properties, one skilled in the art would not look to Nichols for that purpose. The examiner respectfully disagrees. If the wetting or wicking capabilities are ever mentioned in Siggel, there would be no need to look to Nichols for that purpose. As there is a guidance, reasonable expectation of success to modify the polyester fibers of Siggel by adding a fraction of polyethylene glycol as taught by Nichols to achieve the claimed invention, the combination of the references does make out a *prima facie* case of obviousness. Similarly, the combination of Li and Nichols is legally and technically proper for the same reasons set forth above. The examiner incorporates those arguments by reference.

Applicants contend that Li makes a general statement that the foam fibers have at least 10% voids over a cross-sectional area of the fibers. Applicants add that since only one working example shows that the foam fiber having 15 to 20 % void volume, Li could not teach the foam fiber having voids of more than 35% void fraction. The examiner respectfully disagrees. The working examples are provided for purposes of illustration and are not intended to limit the scope of the Li invention. Additionally, because nothing in Li teaches or suggests that a porosity of greater than 35% would materially affect the desired properties of the foamed fiber, the examiner maintains that "at least 10% voids over a cross-sectional area of the fibers"

encompass the claimed range. The void fraction as set forth in the claims is not a patentable distinction.

Applicants contend that Soehngen is improperly combinable with Siegel because they are related to two completely different techniques for making the foamed fibers. The arguments are not found convincing for patentability because Applicants fail to provide any factual evidence or declaration in support of their arguments. Difference in processes does not necessarily render the combination of the references improper and inappropriate. Nowhere in Siggel does teach or suggest that addition of a nucleating agent in an amount of less than 10% by weight would defeat the objectives of Siggel, the examiner thus maintains that the combination of Soehngen and Siggel does establish the 103 rejections.

***The examiner's comments regarding claim 40***

The examiner confirms that claim 40 is not rejected over Siggel but rather Li. Applicants argue that Travelute is not properly combinable with Li because they are designed to the products which are completely different from each other, namely non-foamed filaments and foamed filaments. The examiner respectfully disagrees. Both of them are related to the same product that is a fiber. Li does not specifically disclose that the self-crimped foamed fiber is hollow. However, Li mentions the hollow fibers are known in the art. Travelute teaches that the hollow filaments are light in weight. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the hollow self-crimped foamed fibers

motivated by the desire to reduce the weight and the cost of the product without affecting the mechanical strength of the fibers.

***The examiner's comments regarding claims 48 and 55***

Applicants contend that Li does not anticipate the claimed subject matter because Li does not teach the surface effects set forth in the claims. That is not true. Li discloses a self-crimping foamed fiber made from polyester having a volume fraction of at least 10 % overlapping with the claimed range (abstract). The foamed fiber has at least 5 cells per axial cross section as shown in figure 5. Li discloses the foamed fiber having a denier of 15 and a density less than 0.9 g/cc (table). Li discloses the fiber having a plurality of closed cells and open cells distributed over the cross-sectional area of the fiber (column 1, lines 10-15). The total stretch ratio of both spinning and drawing is about 5 to 250 (column 5, lines 35-40). As shown in figures 6-10, the fiber has a fibrillated surface. Turning to the claimed invention, the surface effects (smooth, fibrillated, channeled and pitted) are dictated by the void volume, cells per axial cross section and total stretch ratio of both spinning and drawing. Li discloses a fiber having the void volume, cells per axial cross section and total stretch ratio of both spinning and drawing within the claimed ranges. Therefore, it is not seen that the fiber could not have surface effects as set forth in the claims. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete. Accordingly, the art rejections are sustained.

**Double Patenting**

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 1-9, 11-16, 20, 21, 40, 41, 43, 45-48, 51-57 and 60 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-67 of copending Application No. 11/244,687. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '687 application fully encompass the claimed subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

14. Claims 1-9, 11-16, 20, 21, 40, 41, 43, 45-48, 51-57 and 60 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-48 of copending Application No. 11/364,242. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '242 application fully encompass the claimed subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HV

/Hai Vo/  
Primary Examiner, Art Unit 1794